process a first pair of cardiac signals to define a first coefficient of variability associated with a variability of the first pair of signals at a first region of the heart;

process a second pair of cardiac signals to define a second coefficient of variability associated with a variability of the second pair of signals at a second region of the heart; and

compare the first coefficient of variability to the second coefficient of variability to determine a direction towards the source of the rhythm disorder.

29. The system of claim **28**, wherein the at least one computing device is configured to processes a first cardiac signal at one or more first time points against a second cardiac signal at one or more second time points to define the first coefficient of variability based on one or more coordinate pairs of the first cardiac signal against the second cardiac signal.

30. The system of claim **28**, wherein the at least one computing device is configured to processes a third cardiac signal at one or more third time points against a fourth cardiac signal at one or more fourth time points to define the second coefficient of variability based on one or more coordinate pairs of the third cardiac signal against the fourth cardiac signal.

31. The system of claim **28**, wherein the first cardiac signal and the third cardiac signal comprise a common signal.

32. The system of claim **28**, wherein the first and second regions are the same region of the heart.

33. The system of claim **28**, wherein the first and second regions are different regions of the heart.

34. The system of claim **28**, wherein at least one of the first coefficient of variability and the second coefficient of variability is determined from at least one of variability in signal timing and variability in signal amplitude among at least one of the first pair of cardiac signals and the second pair of cardiac signals.

35. The system of claim **28**, wherein at least one of the first coefficient of variability and the second coefficient of variability is determined from variability in signal shape among at least one of the first pair of cardiac signals and the second pair of cardiac signals.

36. The system of claim **28**, wherein at least one of the first coefficient of variability and the second coefficient of variability is determined by one or more methods selected from a group consisting of standard deviation analysis, frequency analysis, entropy analysis, cross-correlation analysis, randomness analysis, Monte Carlo simulation methods, quantification of chaos, other complex statistical analyses, and combinations thereof.

37. The system of claim **28**, wherein the variability is in one or more of amplitude, voltage, motion, direction, impedance, conductance, and another dimension other than time.

38. The system of claim **28**, wherein the variability is in time.

39. The system of claim **28**, wherein the at least one computing device is configured to:

iteratively select the first pair of cardiac signals and the second pair of cardiac signals

from a plurality of cardiac signals, each iteratively selected pair differing in at least one cardiac signal;

process the first iteratively selected signal and the second iteratively selected signal from each pair for each iteration to define the first coefficient of variability and the second coefficient of variability, respectively;

construct a matrix of coefficients associated with variability for the iteratively selected pairs of cardiac signals; and

determine one or more sources of the rhythm disorder using the matrix of coefficients.

40. The system of claim **28**, wherein the source of the rhythm disorder is located in a direction from lower coefficients of variability towards higher coefficients of variability.

41. A system to locate a source of a rhythm disorder of a heart, the system comprising at least one computing device configured to:

process a first cardiac signal at one or more first time points against a second cardiac signal at one or more second time points to define a first coefficient associated with variability of one or more coordinate pairs of the first cardiac signal against the second cardiac signal;

process a third cardiac signal at one or more third time points against a fourth cardiac signal at one or more fourth time points to define a second coefficient associated with variability of one or more coordinate pairs of the third cardiac signal against the fourth cardiac signal; and

determine a direction towards the source of the rhythm disorder being from a lower coefficient of variability to a higher coefficient of variability.

42. The system of claim **41**, wherein at least one of the first coefficient of variability and the second coefficient of variability is determined from at least one of variability in signal timing and a variability in signal amplitude.

43. The system of claim **41**, wherein at least one of the first coefficient of variability and the second coefficient of variability is determined from variability in signal shape.

44. The method of claim **41**, wherein at least one of the first coefficient of variability and the second coefficient of variability is determined by standard deviation analysis, frequency analysis, entropy analysis, cross-correlation analysis, randomness analysis, Monte Carlo simulation methods, quantification of chaos, other complex statistical analyses, and combinations thereof.

45. The system of claim **41**, wherein the variability is in one or more of amplitude, voltage, motion, direction, impedance, conductance, and another dimension other than time.

46. The system of claim **41**, wherein the variability is in time.

47. The system of claim **41**, wherein the first cardiac signal and the second cardiac signal occur at the same points in time.

48. The system of claim **41**, wherein the third cardiac signal and the fourth cardiac signal occur at the same points in time.

49. The system of claim **41**, wherein the first cardiac signal and the second cardiac signal represent a first voltage time series and a second voltage time series, respectively.

50. The system of claim **41**, wherein the at least one computing device is further configured to processes cardiac signals further by taking derivatives of the cardiac signals, the derivatives being one of a zero order derivative and a higher order derivative.

51. The system of claim **41**, wherein the first coefficient of variability is determined by a transformation of the plurality of coordinate pairs of the first cardiac signal to the plurality of coordinate pairs of the second cardiac signal.

52. The system of claim **41**, wherein the second coefficient of variability is determined by a transformation of the plurality of coordinate pairs of the third cardiac signal to the plurality of coordinate pairs of the fourth cardiac signal.

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